State of California
Department of Food and Agriculture
Division of Measurement Standards

Certificate Number: 5040-00

California Type Evaluation Program

Certificate of Approval

for Mass Flow Meters

For:

Custody Transfer Control System for Mass Flow Meter Register/Controller
Model: Krohne No. 58801480100
Software Version: V04.82d (or higher)
Generic Make: KEP SUPERtrol-1
Generic Model: ES734ST1L1B2W

Submitted by:

Krohne, Inc.
7 Dearborn Road
Peabody, MA 01960
Tel: (978) 535-6060
Fax: (978) 535-1720
Contact: Barclay Beahm

Standard Features and Options

- Two-line alphanumeric LCD display, 20 characters per line
- Flow rate totalizer with 10 digits of display and flow rate indication
- RS-485 Modbus RTU serial communication with host computer
- Multiple batch function
- Multiple instrument function
- Category 2 method of sealing (physical seal required)
- RS232 serial port for dedicated printer
- Digital and analog I/O capability

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable technical requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: July 13, 2000

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Mike Cleary, Director

Krohne, Inc.
Custody Transfer Control System for Mass Flow Meter
Model: Krohne No. 58801480100

Application: The register/controller is designed to operate with the Krohne Corimass MFM4085-XXXXG+ mass flow meter, and flow signal converter (transmitter) Model MFC085 or the MFS 2000 CT-XXXX meter with MFC 100CT flow signal converter (transmitter). The RS-485 serial port permits the interface with an external computer system. The register/controller controls batching of custody transferred product through a combination of serial and digital I/O capability with additional analog I/O features.

Identification: The KEP SUPERtrol-1 unit has an identification badge located on the side of the display housing.

The software version is momentarily displayed when the registered controller is turned on.

Sealing: The KEP SUPERtrol-1 unit uses a Category 2 method of sealing (physical seal). A wire security seal may be threaded through a hole on the main housing and a hole through the display window cover or lower terminal connection cover. A jumper **must** be in place between terminal connection number 1 and number 11 to lockout the remote calibration/configuration capability. To verify this lockout, push the "menu" button. If the display shows "LOCKED OUT", then the lower terminal connection cover must be sealed. If the display does **not** show "LOCKED OUT", the display window cover must be sealed. This prevents undetected access to the calibration buttons.

Operation: The KEP SUPERtrol-1 register/batch controller is designed to operate remotely with the Krohne Transmitter MFC085 and MFM4085-XXXXG or the MFS-2000CT-XXXX mass flow meter with MFC 100CT transmitter (Certificate of Approval Number 95-047A1) in custody transfer applications. The RS485 serial port requires an interface adapter to communicate with a remote host computer system. The printer can be directly connected to the RS232 serial port on the KEP SUPERtrol-1 unit. The interface to the transmitter is through the terminal connection compartment located on the bottom part of the KEP housing.

Test Conditions: The device was evaluated in the laboratory and at a field test site and was installed with software version V04.82d. The emphasis of this evaluation was on device design, operation, programmable features, and interaction with accessory equipment.

The results of the evaluation indicate the device complies with applicable requirements.

Type Evaluation Criteria Used: Title 4, California Code of Regulations, 2000 Edition

Tested By: C. Nelson (CA)